Maryland Historical Trust

Maryland Inventory of Historic Properties number: BA-2846

Name: RACE RD. OVER STEMMERS RUN

The bridge referenced herein was inventoried by the Maryland State Highway Administration as part of the Historic Bridge Inventory, and SHA provided the Trust with eligibility determinations in February 2001. The Trust accepted the Historic Bridge Inventory on April 3, 2001. The bridge received the following determination of eligibility.

MARYLAND HISTORICAL TRUST

Eligibility Recommended ___X___ Eligibility Not Recommended _____

Criteria: ____A ____B ____C ____D Considerations: ___A ___B ___C ___D ___E ___F ___G __None

Comments:_____

_____

_____

Reviewer, OPS: Anne E. Bruder_____ Date: 3 April 2001____

Reviewer, NR Program: Peter E. Kurtze_____ Date: 3 April 2001____

MARYLAND INVENTORY OF HISTORIC BRIDGES
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION/
MARYLAND HISTORICAL TRUST

MHT No. BA-2846

SHA Bridge No. B 0058 **Bridge name** Race Road over Stemmers Run

LOCATION:
Street/Road name and number [facility carried] Race Road

City/town Essex / Middle River **Vicinity** X

County Baltimore

This bridge projects over: Road____ **Railway**_____ **Water** X **Land** ____

Ownership: State _____ **County** X **Municipal** _____ **Other** _____

HISTORIC STATUS:
Is the bridge located within a designated historic district? Yes _____ **No** X
National Register-listed district ____ **National Register-determined-eligible district** __
Locally-designated district _____ **Other** _____

Name of district _____

BRIDGE TYPE:
Timber Bridge _____:
Beam Bridge _____ **Truss -Covered** ___ **Trestle** ___ **Timber-And-Concrete** ___

Stone Arch Bridge _____

Metal Truss Bridge _____

Movable Bridge _____:
Swing _____ **Bascule Single Leaf** __ **Bascule Multiple Leaf** _____
Vertical Lift _____ **Retractile**_____ **Pontoon** _____

Metal Girder_____:
Rolled Girder _____ **Rolled Girder Concrete Encased** _____
Plate Girder _____ **Plate Girder Concrete Encased** _____

Metal Suspension _____

Metal Arch _____

Metal Cantilever _____

Concrete X:
Concrete Arch X **Concrete Slab**_____ **Concrete Beam** ___ **Rigid Frame** _____
Other _____ **Type Name** _____

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DESCRIPTION:

Setting: Urban ____X____ **Small town** _____ **Rural** _____

Describe Setting:

Bridge B 0058 carries Race Road over Stemmers Run in Baltimore County. Race Road extends north-south and Stemmers Run flows west to east. The bridge is located in the Essex/Middle River vicinity and is surrounded by industrial property.

Describe Superstructure and Substructure:

Bridge B 0058 is a 1-span, 2-lane, filled concrete arch bridge. The bridge, built in 1929, is 14.3 meters (47 feet) long and has a clear roadway width of 6 meters (19.9 feet) between curbs; there are no sidewalks. The out-to-out width is 6.5 meters (21.2 feet). The superstructure consists of one arch which supports a concrete deck and solid concrete parapets. The arch has a clear span of 13.7 meters (45 feet) with a clear height of less than 3 meters (10 feet). The concrete deck has a bituminous wearing surface and the structure has solid concrete parapets. The substructure consists of two concrete abutments and four concrete wingwalls. The bridge is posted for 12.7 tonnes (14 tons), 20.7 tonnes (23 tons) and 36.3 tonnes (40 tons) for H, MD Type 3 and MD Type 3S2 vehicles, respectively. The bridge has a sufficiency rating of 69.7.

According to the 1995 inspection report, this structure was in good condition. The bituminous wearing surface and parapets are in generally good condition. There are three spalls located on the underside of the arch, however, the overall condition of the arch is good. The wingwalls have moderate scaling and are overgrown with vegetation. The southwest wingwall has minor erosion.

Discuss Major Alterations:

There have been no major alterations to Bridge B 0058.

HISTORY:

WHEN was the bridge built: ____1929____
This date is: Actual ____X____ **Estimated** _____
Source of date: Plaque ____ **Design plans** ____ **County bridge files/inspection form** __X__
Other (specify): _____

WHY was the bridge built?

The bridge was constructed in response to the need for more efficient transportation network and increased load capacity.

WHO was the designer?

Unknown

WHO was the builder?

Unknown

WHY was the bridge altered?

N/A

Was this bridge built as part of an organized bridge-building campaign?

There is no evidence that the bridge was built as part of an organized bridge building campaign.

SURVEYOR/HISTORIAN ANALYSIS:

This bridge may have National Register significance for its association with:
A - Events _____ B- Person _____
C- Engineering/architectural character ____X____

The bridge is eligible for the National Register of Historic Places under Criterion C, as a significant example of concrete arch construction. The structure has a high degree of integrity and retains such character-defining elements of the type as the arch ring, barrel, spandrel walls, parapets, abutments and wingwalls.

Was the bridge constructed in response to significant events in Maryland or local history?

The advent of modern concrete technology fostered a renaissance of arch bridge construction in the United States. Reinforced concrete allowed the arch bridge to be constructed with much more ease than ever before and maintained the load-bearing capabilities of the form. As the structural advantages of reinforced concrete became apparent, the heavy, filled barrel of the arch was lightened into ribs. Spandrel walls were opened, to give a lighter appearance and to decrease dead load. This enabled the concrete arch to become flatter and multi-centered, with longer spans possible. Designers were no longer limited to the semicircular or segmental arch form of the stone arch bridge. The versatility of reinforced concrete permitted development of a variety of economical bridges for use on roads crossing small streams and rivers.

Maryland's roads and bridge improvement programs mirrored economic cycles. The first road improvement of the State Roads Commission was a 7 year program, starting with the Commission's establishment in 1908 and ending in 1915. Due to World War I, the period from 1916-1920 was one of relative inactivity; only roads of first priority were built. Truck traffic resulting from war related factories and military installations generated new, heavy traffic unanticipated by the builders of the early road system. From 1920-1929, numerous highway improvements occurred in response to the increase in Maryland motor vehicles from 103,000 in 1920 to 320,000 in 1929, with emphasis on the secondary system of feeder roads which moved traffic from the primary roads built before World War I. After World War I, Maryland's bridge system also was appraised as too narrow and structurally inadequate for the increasing traffic , with plans for an expanded bridge program to be handled by the Bridge Division, set up in 1920. In 1920 under Chapter 508 of the Acts of 1920 the State issued a bond of $3,000,000.00 for road construction; the primary purpose of these monies was to meet the state obligations involving the construction of rural post roads. The secondary purpose of these monies was to fund (with an equal sum from the counties) the building of lateral roads.

The number of hard surfaced roads on the state system grew from 2000 in 1920 to 3200 in 1930. By 1930, Maryland's primary system had been inadequate to the huge freight trucks and volume of passenger cars in use, with major improvements occurring in the late 1930's.

As the nation's automotive traffic increased in the early twentieth century, local road networks were consolidated, and state highway departments were formed to supervise the construction and improvement of state roads. With a diverse topographical domain encompassing numerous small and large crossings, Maryland engineers quickly recognized the need for expedient design and construction through the standardization of bridge designs.

The concept and practice of standardization was one of the most important developments in engineering of the twentieth century. In Maryland, as in the rest of the nation, the standardized concrete types became the predominant bridge types built. In the period 1911 to 1920 (the decade in which standardized plans were introduced), beams and slabs constituted 65 percent and arches 35 percent of the extant 29 bridges built in Maryland during this period. In the following decade, 1921-1930, the beam (now the T-beam) and slab increased to 73 percent and the arch had declined to 27 percent of the 129 extant bridges; in the next decade (1931-1940), the beam and slab achieved 82 percent and arches had further declined, constituting only 18 percent of the total of extant bridges built on state-owned roads between 1931 and 1946.

Although beam and slab bridges became the utilitarian choice, it appears that the arch was selected when aesthetic as well as other site conditions were considered. The architectural treatment of extant arch bridges supports this assessment. Many of these bridges were multiple span structures with open spandrels or masonry facing. Another decorative feature of the concrete arch bridge was an open, balustrade-style parapet. Despite the popularity of ornamental arches and the increase in use of beam and slab bridges, examples of simpler, single and multiple span closed concrete arch bridges with solid parapets continued to be constructed throughout the early twentieth century.

When the bridge was built and/or given a major alteration, did it have a significant impact on the growth and development of the area?

There is no evidence that the construction of this bridge had a significant impact on the growth and development of this area.

Is the bridge located in an area which may be eligible for historic designation and would the bridge add to or detract from the historic/visual character of the potential district?

The bridge is located in an area which does not appear to be eligible for historic designation.

Is the bridge a significant example of its type?

The bridge is a potentially significant example of a concrete arch bridge, possessing a high degree of integrity.

Does the bridge retain integrity of important elements described in Context Addendum?

The bridge retains the character-defining elements of its type, as defined by the Statewide Historic Bridge Context, including the arch ring, barrel, spandrel walls, parapets, abutments and wingwalls.

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Is the bridge a significant example of the work of a manufacturer, designer, and/or engineer?

This bridge is not a significant example of the work of a manufacturer, designer, and/or engineer.

Should the bridge be given further study before an evaluation of its significance is made?

No further study of this bridge is required to evaluate its significance.

BIBLIOGRAPHY:

County inspection/bridge files X **SHA inspection/bridge files** _____
Other (list): _____

Johnson, Arthur Newhall
1899 The Present Condition of Maryland Highways. In *Report on the Highways of Maryland.* Maryland Geological Survey, The Johns Hopkins University Press, Baltimore.

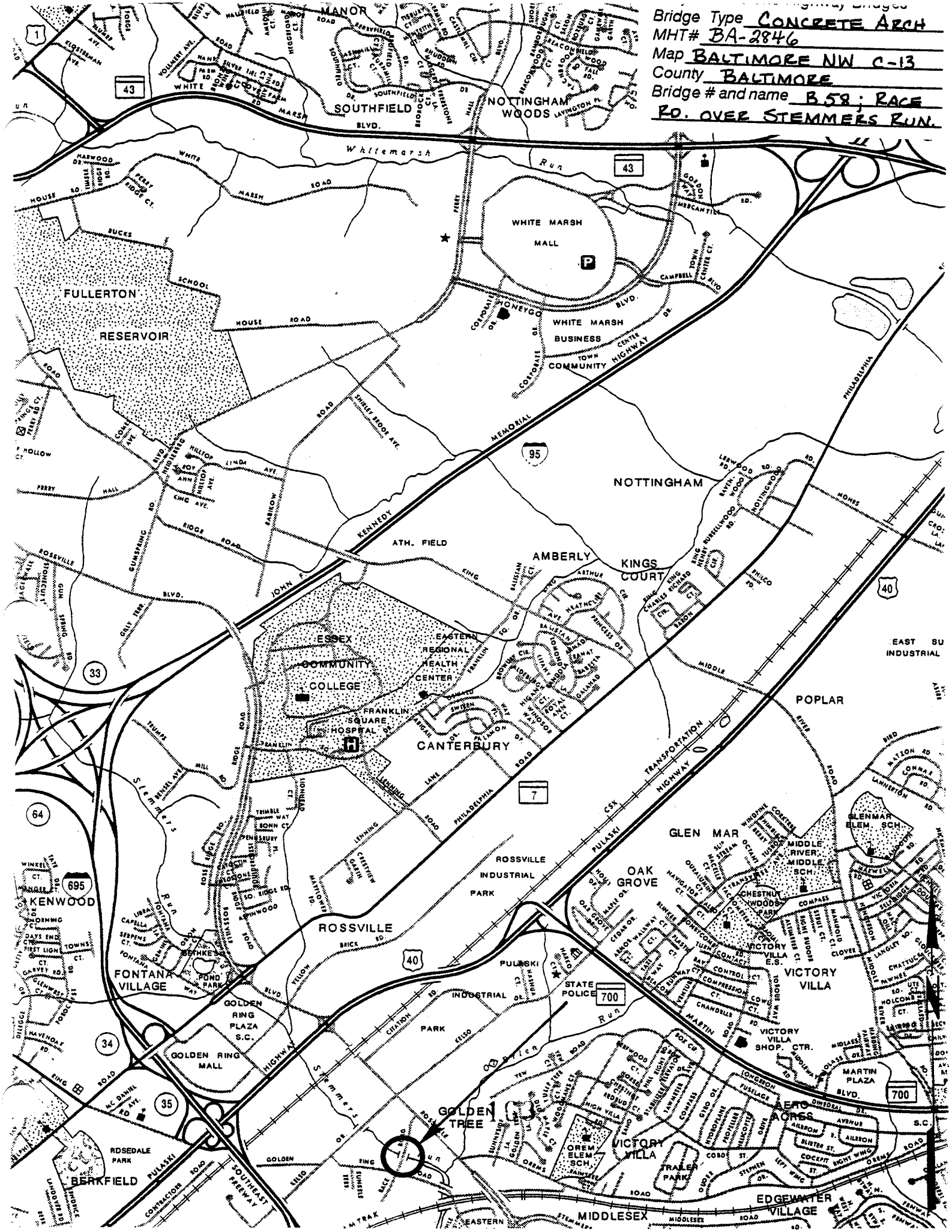
P.A.C. Spero & Company and Louis Berger & Associates
1995 Historic Highway Bridges in Maryland: 1631-1960: Historic Context Report. Maryland State Highway Administration, Maryland State Department of Transportation, Baltimore, Maryland.

Tyrrell, H. Grattan
1909 *Concrete Bridges and Culverts for Both Railroads and Highways.* The Myron C. Clark Publishing Company, Chicago and New York.

SURVEYOR:

Date bridge recorded December 1997
Name of surveyor Wallace, Montgomery & Associates / P.A.C. Spero & Company
Organization/Address P.A.C. Spero & Co., 40 W. Chesapeake Avenue, Baltimore, MD 21204
Phone number (410) 296-1635 **FAX number** (410) 296-1670

Bridge Type CONCRETE ARCH
MHT# BA-2846
Map BALTIMORE NW C-13
County BALTIMORE
Bridge # and name B 58 ; RACE RD. OVER STEMMERS RUN.



Inventory # BA-2846

Name B0058 - RACE RD OVER STEMMERS RUN
County/State BALTIMORE COUNTY / MD
Name of Photographer DAVE DIEHL
Date 1/95

Location of Negative SHA

Description NORTH APPROACH LOOKING SOUTH

Number 1 23 of 24

Inventory # BA-2846

Name B0058-PIKE RD OVER STEMMERS RUN
County/State BALTIMORE COUNTY/MD
Name of Photographer DAVE DIEHL
Date 1/95

Location of Negative SHA

Description WEST ELEVATION LOOKING EAST

Number 24 of 34

Inventory # BA-2846

Name BODSB-RACE ADOVER STEMMERS RUN
County/State BALTIMORE COUNTY/MD
Name of Photographer DAVE DIEHL
Date 1/95

Location of Negative SHA

Description EAST ELEVATION LOOKING WEST

Number 3 25 of ~~39~~ 4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Inventory # BA-2846

Name B0058-RACE RD OVER STEMMERS RUN
County/State BALTIMORE COUNTY / MD
Name of Photographer DAVE DIEHL
Date 1/95

Location of Negative SHA

Description SOUTH APPROACH LOOKING NORTH

Number 4 26 of 39 4